

XLIV.—On the small Hamsters that have been referred to *Cricetulus phæus* and *campbelli*. By OLDFIELD THOMAS.

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THE small unstriped Hamsters with naked soles, which occur over an area ranging from the Crimea, Asia Minor, and Palestine on the west to the Altai, Kashghar, and Ladak on the east, have all been either referred to one species, called *phæus*, or occasionally split up into several on size, a character that proves most illusory. Both their nomenclature and characters still remain in much confusion.

Firstly, I regret to say that the name *phæus* does not stand for any of them, as it is antedated by an earlier term.

In 1773\* Pallas described, of this group, the species *migratorius* (type-locality: R. Ural, S.W. of Orenburg), *sungorus*† (R. Irtysh, Siberia), *arenarius* (Irtysh), and *barabensis* (Irtysh), the first and fourth of which he changed in the 'Glires'‡ to *accedula* and *furunculus*, while he added to them *phæus* (type-locality: Lower Volga, near Sarepta). By a curious fatality, not unusual in nomenclature, this name, the latest of all, got complete dominance over the others, and has been universally used to the present time. No doubt the wide utilization of Pallas's well-known 'Glires' was the cause of the mistakes involved.

Putting aside *sungorus* and *barabensis* (*furunculus*) as not of the "*phæus*" group, we may first accept without hesitation Dr. Satunin's opinion§ that *accedula* (i. e. *migratorius*) is the same as *phæus*, both being from the same region of Southern Russia. This acceptance, however, involves the use of the senior name, *migratorius*, and the consequent disappearance of *phæus*. Dr. Satunin also considers *arenarius*, from the Irtysh, as the same species.

On laying out the whole Museum series assigned to "*phæus*," rather more than 80 in number, I find that while the Central Asiatic forms are, as a general rule, larger, with larger teeth and longer hair than those from the west, yet that both skull and teeth vary in series of each form to such an extent as to overlap each other. I therefore provisionally

\* Reise, ii. pp. 703-704 (1773).

† *Sungorus* cannot be treated as a misprint for *songarus*, as has commonly been done, for it not only occurs both in text and plate, but is also used in the same form for another animal on p. 730.

‡ P. 86 (1779).

§ Mittheil. Kaukas. Mus. ii. p. 340 (1906).

combine them all (except a set from Ladak) as one species, which, as shown above, should bear the name *migratorius*.

The status of the Grecian form, *Cricetulus atticus*, and that of Palestine, to which the name *cinerascens*\* applies, I do not propose at present to discuss, but I confess I doubt very much if either of them deserves specific distinction from *C. migratorius*.

Putting aside these, the subspecies of *C. migratorius* which may be recognized appear to be as follows :—

*C. migratorius migratorius*, Pall.

Synn. *accedula*, Pall., *phæus*, Pall., *eversmanni*, Brandt.

*Type-locality*. R. Ural.

*Range*. S. Russia, Caucasus region, Transeaspia, Persia, and Asia Minor south of the coastal forest-region of the north-east.

Size comparatively small; skull about 27 mm. in length, its upper tooth-row 4 mm., the teeth themselves narrow and light. Fur short, hairs of back about 9 mm. in length. Colour above pale grey, generally with indistinct median darker dorsal shading. Hairs of under surface with grey bases, except that they are wholly white on an area on the throat, which extends in a median point down to between the fore legs.

*C. migratorius vernula*, subsp. n.

*Type-locality*. Khotz, near Trebizond.

Range no doubt all the forest coastal strip along the south-east corner of the Black Sea.

Size averaging slightly larger than in true *migratorius*. Fur of back 8–9 mm. in length. Colour darker throughout, the upper surface near “mouse-grey,” the median dark dorsal area faintly evident. Hairs of under surface with a shorter length of white above the slaty, and the white itself not so pure, but faintly suffused with buffy; white throat-area less extended towards the chest, ending about halfway towards the fore limbs. Ears with proectote markedly blackish. Tail distinctly darker above, at least for its basal half.

Dimensions of type :—

Head and body 115 mm.; tail 32; hind foot 17; ear 17·5.

Skull: greatest length 28·2; condylo-incisive length 26; palatal foramina 5; upper molar series 4 2.

\* *Hypudæus cinerascens*, Wagn. Wieg. Arch. 1848, p. 184.

*Type.* Adult female. B.M. no. 6.5.1.83. Original number 2443. Collected 25th February, 1906, by A. Robert. Presented by Oldfield Thomas. Seven skins and six specimens in spirit.

A darker and more saturate race of *C. migratorius*, a variation which occurs in other forms from the same district. Its range eastwards into Trans-Caucasia remains to be worked out, but a specimen in spirit from the Talysch Mts. appears to be very similar to it. To the south, a specimen from "60 miles north of Erzeroum" (*Woosnam*) would also seem to be referable to the same species.

*C. migratorius arenarius*, Pall.

*Type-locality.* Baraba Steppes, Lower Irtysh, Siberia. Southwards to Lake Balkhash.

Under surface wholly white, the hairs white to their bases.

A spirit-specimen from Mt. Bek Dauata, north of Lake Balkhash (*W. Bateson*), has head and body 94 mm., tail 26, hind foot 15. Its skull measures 28.5 mm. in total length, its tooth-row 4.2 mm.

The Museum only contains the above-mentioned spirit-specimen, whose agreement with Pallas's description as to the whiteness of the under surface leads me to assign it to the true *arenarius*, and to consider the next form, of which we have a large number of specimens, as distinct.

*C. migratorius griseiventris*, Sat.

*Type-locality.* R. Bis-shen-gol, Altain-nuru, Gobi Altai.

*Range.* Central Asia. Samarkand and eastwards along the Thian Shan, filling up the area between the ranges of *arenarius* and *fulvus*.

Size averaging larger and teeth heavier than in the western forms. Fur longer—hairs of back 10 mm. or more. General colour above pale grey, more or less strongly suffused with buffy or fulvous. Under surface with the hairs snowy white to the bases on throat and inguinal region, but broadly slaty at base on the belly.

A male from Djarkent measures:—Head and body 120 mm.; tail 27; hind foot 16. Skull: greatest length 30; upper tooth-row 4.5.

Of this form the Museum possesses a fine series from Djarkent, collected by W. Rückbeil, besides specimens from Samarkand, Dzungaria, Hami and elsewhere in the Carruthers collection. It differs from *C. m. arenarius* by the presence of broad slaty bases on the belly hairs.

*C. migratorius fulvus*, Blanf.

*Type-locality.* Kashgar.

Range between 35° and 41° N., 74° and 80° E., so far as our specimens show, but probably extending considerably further, especially towards the east.

Like *C. m. griseiventris* in all respects except that the general colour is a little paler; the white of the under surface passes higher up on the sides, and is less modified by slaty bases, which are only present, and then very inconspicuously, on the centre of the belly.

Mr. Holmes-Tarn collected some specimens of this beautiful little Hamster on the Karakash River, Chinese Turkestan, and Mr. Carruthers an example on the north side of the Karakoram Mts. The original specimens were obtained during the Yarkand Mission, and the type is in Calcutta.

Subspecies *fulvus* and *griseiventris* are no doubt very closely allied, but may apparently be distinguished by the darker colour and greater amount of slaty on the belly of the latter.

In the nearly or quite pure white belly *fulvus* agrees with the typical *arenarius* of much further north, though the two appear to be separated by the range of *griseiventris*. Specimens from many further localities will be needed before the exact relations of the three can be determined.

Although I provisionally accept Dr. Satunin's view as to the Central Asian Hamsters belonging to the same species as *C. migratorius*, I think it not improbable that they really ought to be divided into two species—a small-toothed one, of which *migratorius* and *vernula*, and perhaps *arenarius*, would be subspecies; and a large-toothed Asiatic one, consisting of the subspecies *fulvus* and *griseiventris*.

But the following animal must in any case be distinguished as a species:—

*Cricetulus alticola*, sp. n.

General characters and colour above about as in *C. m. fulvus*, but the hairs of the under surface broadly slaty at base, even on chest and throat, those of the chin being alone white to their roots. Ears grey, not darkened on the pre-tote. Tail heavily haired, wholly white.

Skull distinguished from that of all forms of *C. migratorius* by its conspicuously smaller bullæ, small both vertically and horizontally. Palatal foramina comparatively long, parallel-sided.

Dimensions of type (measured in the flesh):—

Head and body 98 mm.; tail 31; hind foot 15·5; ear 15.

Skull: greatest length 27; condylo-incisive length 24; palatilar length 11·3; palatal foramina 5·5; breadth of bulla at right angles to its greatest diameter 3·3; upper tooth-row 3·9.

*Hab.* Ladak. Type from Shushal, 13,500'; other specimens from Durgu Vil and Khardoug (*Crumph*), and Teza, Upper Sutlej Valley (*Whitehead*).

*Type.* Adult male. B.M. no. 6.10.3.13. Original number 115. Collected 29th June, 1906, by C. M. Crumph, and presented to the National Museum by Col. Ward. Four specimens in all.

This Hamster has a quite extraordinary resemblance to the pale-coloured Voles of the genus *Alticola* (e. g., *A. stracheyi*, *cricetulus*, or *phasma*), with which it agrees in proportions, length and colour of fur, and external appearance generally; it even has, unlike *C. migratorius*, their slaty-based throat-hairs. In fact, the only points that show it is not a Vole are the shorter and more "pudsy" feet and the finely-haired untufted ears—neither of which affect the general appearance.

*C. m. fulvus* is also very like *Alticola phasma* above, but the resemblance is spoilt below by the nearly wholly white under surface.

This Ladak Hamster is probably most nearly allied to the Tibetan *C. lama*, B.-Ham., but is considerably smaller and has a shorter tail.

With regard to the systematic arrangement of the small Hamsters, I agree with Mr. Miller as to the advisability of generically separating my *Cricetulus bedfordiæ* from the others (genus *Phodopus*, Miller), and would, indeed, go further by also distinguishing the species *sungorus* and *campbelli*, which have an intermediate condition, both of foot-structure and dentition. The new genus might be called:—

#### CRICETISCUS, g. n.

Soles densely hairy, the three posterior of the six normal pads completely suppressed, and the three distal ones very small, hidden in the hair. Teeth neither so complicated as those of *Cricetulus*, in which there is a broad notch, and commonly a deep pit, between the outer and inner main cusps of each lamina, nor so simplified as those of *Phodopus*, in which the notch is reduced and the pit is absent.

Genotype: *C. campbelli*. (*Cricetulus campbelli*, Thos.)

Other species: *C. sungorus*. (*Mus sungorus*, Pall.)

Although *C. sungorus* was known so much the earlier, it is only represented in the material available to me by a single dried skin, in which the characters are not very clearly discernible. With both skins, skulls, and a spirit-specimen of *C. campbelli* for examination, I therefore think it advisable to make that species the genotype.

The position of Satunin's *Cricetulus roborovskii* is not clear, as his expression "Die Sohlen sind dicht mit weissem Haar bekleidet" is applicable either to a *Phodopus* or a *Cricetiscus*.

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XLV.—*Descriptions of New Pyralidæ of the Subfamilies Hydrocampinæ, Scoparianæ, &c.* By Sir GEORGE F. HAMPSON, Bart., F.Z.S., &c.

[Continued from p. 376.]

(1 i) *Cataclysta nyasalis*, sp. n.

Head, thorax, and abdomen white mixed with dark brown with a cupreous gloss; antennæ brown ringed with white; palpi white, black-brown above; fore and hind femora and tibiæ black-brown above; claspers of male yellowish. Fore wing with the base white, brown at costa; an inwardly oblique orange-yellow antemedial band from cell to inner margin, defined by brown lines and with white beyond the outer line; the medial area white very thickly irrorated with dark cupreous brown; postmedial line white, slightly incurved below vein 3 and ending at tornus, an orange-yellow band beyond it from below costa to vein 3; the terminal area brown with a white line from costa before apex to termen at vein 4, an orange-yellow band beyond it on termen from apex to discal fold; cilia dark brown with some white at tips. Hind wing white, very thickly irrorated with dark cupreous brown from near base to the subterminal line, which is black-brown defined on each side by white, slightly incurved below vein 2; five partly conjoined ocellate black spots on termen from below apex to above tornus, with metallic silvery points between them, the anal spot larger with the silvery point in its centre, some orange-yellow points beyond them on termen; cilia cupreous brown at base, white slightly tinged with brown at tips.

*Hab.* BR. C. AFRICA, Mt. Mlanje (Neave), 3 ♂, 1 ♀ type. *Exp.* 10 mm.